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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
08/991,628	11/05/97	STOMINGER	J	HAR-001DV

HM22/0616

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EXAMINER	
CUNNINGHAM, T	
ART UNIT	**PAPER NUMBER**
1644	12

DATE MAILED: 06/16/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/991,628	Stominger, J. L.
Examiner	**Group Art Unit**
Thomas Cunningham	1644

☒ Responsive to communication(s) filed on *May 10, 1999*.

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *3-19 and 22* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *3-19 and 22* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *4*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1. Applicant's election without traverse of Group I, claims 3-19 and 22 and the species of SEQ ID NO: 3 in Paper No. 10 is acknowledged. Applicant is required to point out which of claims 3-19 and 22 embrace the elected species of SEQ ID NO:3. The instant claims have been examined only to the extent that they embrace the peptide of SEQ ID NO: 3. Claims 19 and 22 do not appear to embrace the elected species of pemphigus vulgaris peptide of SEQ ID NO: 3 because they are limited to peptides with other SEQ ID NOS.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 3-19 and 22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims under examination are directed to pharmaceutical preparations for tolerization comprising the peptide of SEQ ID NO: 3. The peptide of SEQ ID NO: 3 is a fragment of a pemphigus vulgaris autoantigen known as desmoglein 3, see page 37 of the specification. Page 38 of the specification suggests that presentation of the peptide of SEQ ID NO: 3 in the context of the MHC Class II (HLA-DR) molecule DRB1*0402 may be critical for initiating T cell dependent autoimmunity in pemphigus vulgaris.

One with skill in the art would not have a reasonable expectation of inducing tolerance to PV using the peptide of SEQ ID NO: 3 for the following reasons: (1) immunization of an individual with an HLA DRB1*0402 background with the peptide of SEQ ID NO: 3 would be expected to cause antigen presenting cells to present an autoepitope on SEQ ID NO: 3 to the individual's T cell population, thus expanding and activating autoreactive T cells and exacerbating PV.

(2) While the peptide of SEQ ID NO: 3 was identified by a putative binding motif for DRB1*0402, there is no evidence of record that this peptide in fact binds to DRB1*0402. According to O'Sullivan the presence of a putative binding motif residues does not necessarily correlate with actual binding to an MHC molecule because both binders and nonbinders may have the putative binding motif, see last sentence in abstract. Without the ability to bind and be presented to T cells the peptide of SEQ ID NO: 3 would not be expected to modulate T cell activity.

Evidence that it would have been within the skill of the art to compound the peptide of SEQ ID NO: 3 in a form that induces tolerance rather than exacerbating disease and limitation of the claims to preparations that are formulated to induce tolerance rather than induce T cell responses would help address point (1) above. Applicant should also point out a basis in the specification for the production of tolerogenic compositions. Evidence that the peptide of SEQ ID NO: 3 in fact binds to DRB1*0402 (or other HLA molecules with a demonstrated association with PV) would help address point (2).

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 3-19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by the pemphigus vulgaris antigen admitted as prior art on page 37 of the specification or as taught by Amagai et al., Cell 67: 869-877 (1991). Page 37 indicates that "the pemphigus vulgaris autoantigen is known". The claim language "consisting essentially of" does not exclude the full-length autoantigen admitted as prior art. Limitation of the claim language to products consisting of SEQ ID NO: 3 would obviate this rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas M. Cunningham, Ph.D., J.D., whose telephone number is (703) 308-3968. Dr. Cunningham can generally be reached Monday through Thursday from 7:30AM to 6:00 PM. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

TC

THOMAS M. CUNNINGHAM
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GROUP 1800